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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/494,787	01/31/2000	John A. Mount	SEA9274	3950

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EXAMINER

SORRELL, ERON J

ART UNIT PAPER NUMBER

2182

DATE MAILED: 01/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/494,787

Applicant(s)

MOUNT, JOHN A.

Examiner

Eron J. Sorrell

Art Unit

2182

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 December 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 6-15 is/are allowed.
- 6) ☒ Claim(s) 1-5 and 16-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 January 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn.

Claim Rejections - 35 USC § 101

2. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

3. Claims 16-20 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

4. Claims 16-20 describes a method that is not limited to tangible embodiments. The claims detail manipulation of information in a in a register or parameter and providing information over a bus, which lacks practical application because it can easily be construed as an abstract idea as well as having no concrete or useful application/result. The Examiner suggests amending the claims to include positive recitations of where the data is coming from, where the data is going, and the practical application of the claimed method.

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5. To expedite a complete examination of the instant application, the claims rejected under 35 USC 101 (nonstatutory) above are further rejected as set forth below in anticipation of applicant amending these claims to place them within the four statutory categories of invention.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1,2,3,5,16,18, and 19, are rejected under 35 U.S.C. 102(b) as being anticipated by Hessing et al. (U.S. 5,276,564 hereinafter "Hessing").

8. Referring to claim 1, Hessing teaches in an apparatus (fig. 1) having a bus (see all signal lines connecting items 12,20, and 26, note the bus comprises all of the connecting signal lines) operatively coupled to a first controller chip (see item 26 in figure 1) and a first channel chip (see item 20 in figure 1), the channel chip having several registers (fig.

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2), the storage system also having a storage medium (see lines 38-57 of column 2) operatively coupled to the bus through a storage medium interface (see item 12 in figure 1), a method for retrieving data recorded on the storage medium comprising the step of:

(a) retrieving a first portion of the record data via the bus (see lines 24-47 of column 5);

(b) updating some of the registers via the bus (see lines 49-67 of column 5); and

(c) retrieving a second portion of the record data via the bus (see lines 24-47 of column 5).

9. Referring to claim 2, Hessing teaches in interface includes a read head, further comprising a step (d) of repositioning the storage medium interface with respect to the storage medium, between retrieving steps (a) and (c) (see lines 38-57 of column 2).

10. Referring to claim 3, Hessing teaches the interface has a plurality of operating parameters that are modified in the updating step (see lines 11-19 of column 2, note the interface can transfer data or servo data).

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11. Referring to claim 5, Hessing the registers contain at least one mode-indicating value (see lines 49-67 of column 5, note either the data mode or servo mode is in operation).

12. Referring to claim 16, Hessing teaches a method comprising:
providing data via a bus (see lines 24-47 of column 5, see all signal lines connecting items 12,20, and 26, note the bus comprises all of the connecting signal lines);

updating at least one register or parameter via the bus
(see lines 49-67 of column 5); and

providing data via the bus responsive to the updating (see lines 24-47 of column 5).

13. Referring to claim 18, Hessing teaches the bus is parallel (see all signal lines connecting items 12,20, and 26, note the bus comprises all of the connecting signal lines).

14. Referring to claim 19, Hessing teaches the steps are controlled by a processor (see lines 48-67 of column 3).

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Claim Rejections - 35 USC § 103

15. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

16. Claims 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hessing in view of Du et al. (U.S. Patent No. 6,381,085 hereinafter "Du").

17. Referring to claim 4, Hessing fails to teach the registers contain at least one read channel parameter value selected from the group consisting of: a precompensation value, a filter coefficient value, and a phase offset value.

Du teaches in an analogous system, registers containing a read channel parameters comprising at least a filter coefficient value (see lines 21-35 of column 2).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to modify the system and method of Hessing with the above limitation of Du. One of ordinary skill in the art would have been motivated to

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make such modification because Du suggests this parameter helps improve the bit error rate (see lines 21-35 of column 2).

18. Claims 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hessing in view of O'Brien et al. (U.S. Patent No. 3,883,853 hereinafter "O'Brien").

19. Referring to claim 17, Hessing fails to teach the bus is a serial bus. O'Brien teaches, in an analogous system, the bus being a serial bus (see data bus in figure 3).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to modify the system of Hessing such that the bus is a serial bus to provide faster data transfer rates.

20. Claims 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hessing in view of Taniai et al. (U.S. Patent No. 5,438,665 hereinafter "Taniai").

21. Referring to claim 20, Hessing fails to teach the steps are provided by a DMA controller. Taniai teaches a DMA controller that provides data via a bus, updates registers via a bus, and

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provides data via the bus responsive to the update (see lines 6-32 of column 4).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to modify the system of Hessing with the above teachings of Taniai. One of ordinary skill in the art would have been motivated to make such modification in order to relieve the processor of the burdensome task of transferring data.

Allowable Subject Matter

22. Claims 6-15 are allowed.

23. The following is a statement of reasons for the indication of allowable subject matter: The prior art of record fails to teach or suggest alone or in combination an apparatus and system comprising: a value table indexed by zone identifiers, a DMA controller, a microprocessor coupled to the DMA controller, and several read channel registers, wherein the DMA controller retrieves values indexed by the zone identifier, updates at least some of the read channel registers from the retrieved values, and reconfiguring the interface to read from a another zone (as required by claim 6). The prior art also fail to teach or suggest alone or in combination a DMA controller chip to read from a memory containing several values indexed by zone

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identifiers and update several registers in a channel chip in response to a zone transition event (as required by claim 15).

Response to Arguments

24. Applicant's arguments with respect to claims 1,6,16, and 20 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eron J. Sorrell whose telephone number is 571 272-4160. The examiner can normally be reached on Monday-Friday 8:00AM - 4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim Huynh can be reached on 571-272-4147. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

EJS
January 13, 2006



KIM HUYNH
SUPERVISORY PATENT EXAMINER

1/13/06